

JOSÉ SEBASTIÁN CARRAZCO GAXIOLA

+1 (470) 936-4797 ◊ Atlanta, GA., USA

sebcrz@gmail.com, jcarrazcogaxiola1@student.gsu.edu

EDUCATION

Georgia State University (GSU), August 2022 - Present
Department of Physics and Astronomy
Atlanta, Georgia
Ph.D. in Astronomy

Georgia State University (GSU), August 2022 - Summer 2024 (*expected*)
Department of Physics and Astronomy
Atlanta, Georgia
M.S. in Physics, Concentration in Astronomy

Universidad Nacional Autónoma de México (UNAM), January 2022 - June 2022
Instituto de Astronomía
Coyoacán, Mexico City
Master in Science, concentration in Astrophysics
Withdrew. *Accepted in the program, enrolled one semester because of starting Astronomy Ph.D. program at Georgia State University in Fall 2022.*

Universidad Autónoma de Sinaloa (UAS), August 2016 - February 2021
Facultad de Ciencias de la Tierra y el Espacio
Culiacán, Sinaloa
Bachelor of Astronomy
Cumulative GPA: 9.09/10
Degree earned by the dissertation:
Preliminary study of the TAOS-II and DDOTI projects to search for transiting exoplanets from the OAN-SPM. (Written in spanish) Presented in November 2021, approved with honors.

RESEARCH EXPERIENCE

1.5m CTIO/SMARTS CHIRON Fellow, January 2023 - Present
RECONS Institute
Chambersburg, Pennsylvania

Graduate Research Assistant, August 2022 - Present
Physics & Astronomy Department, GSU
Atlanta, Georgia

- Working with RECONS and the RKSTAR project.

Graduate Research Assistant, January 2022 - July 2022
Instituto de Astronomía, UNAM
Coyoacán, Mexico City

- Research assistant at the project SAINT-EX observatory, located at San Pedro Mártir National Astronomical Observatory. Task: Launched the remote observations (49 nights); worked with the reduction and nightly report maker pipeline; searched for new secondary targets in archive data in order to re-run the reduction pipeline.

Dissertation, in order to get the Bachelor degree in Astronomy, August 2019 - August 2021
Instituto de Astronomía, UNAM
Coyoacán, Mexico City

- *Title:* Preliminary study of the TAOS-II and DDOTI projects to search for transiting exoplanets from the OAN-SPM.
- *Advisors:* Dr. Yilen Gómez Maqueo Chew, Dr. Emma Margarita Pereyra Talamantes, Dr. Jesús López Hernández
- Preliminary study to search for candidates of transiting exoplanets at the San Pedro Mártir National Astronomical Observatory. Through: 1) using Transneptunian Automated Occultation Survey II (TAOS-II) fields of views, search a sample of white dwarfs stars to observe and obtain their lightcurves in order to search for transiting exoplanets; 2) an with the Deca-Degree Optical

Transient Imager (DDOTI) developed the tools to work with the data of a certain field with one confirmed Hot-Jupiter exoplanet to analyze the sampling method and precision.

Intern, as part of UAS's Professional Practices <i>Instituto de Astronomía, UNAM (Virtual)</i>	March 2021 - June 2021 <i>Coyoacán, Mexico City</i>
Summer Research Fellow, Mexican Academy of Sciences (AMC) <i>Instituto de Astronomía, UNAM (Virtual)</i>	June 2020 - September 2020 <i>Coyoacán, Mexico City</i>
Brigadist, as part of UAS's Social Service <i>Instituto de Astronomía, UNAM</i>	September 2019 - February 2020 <i>Coyoacán, Mexico City</i>
Intern, Scientific and Technological Summer Research of the Pacific <i>Instituto de Astronomía, UNAM</i>	June 2019 - August 2019 <i>Coyoacán, Mexico City</i>
Intern, Undergraduate Summer Research <i>Instituto de Astronomía, UNAM</i>	June 2018 - August 2018 <i>Coyoacán, Mexico City</i>

OBSERVING EXPERIENCE

SMARTS CTIO 1.5m telescope <i>7 nights using the CHIRON Spectrograph, classical mode</i>	06/2023 <i>CTIO, Chile</i>
SMARTS CTIO 0.9m telescope <i>11 nights using CCD camera, classical mode</i>	06/2023 <i>CTIO, Chile</i>
OAN-SPM SAINT-EX 1.0m telescope <i>50 nights using CCD camera, (remote)</i>	02/2022-06/2022 <i>Ensenada, Mexico</i>
Telescope observer INAOE's Guillermo Haro Observatory 2.12m <i>13 nights using NIR CCD camera, classical mode</i>	11/2017 - 12/2018 <i>Cananea, Mexico</i>

PUBLICATIONS

1. Sebastián Carrasco Gaxiola, Hodari-Sadiki Hubbard-James, Todd Henry, Timothy Johns, Wei-Chun Jao, and Leonardo Paredes. Identifying young and active stars among the nearest 1500 k dwarfs within 40 parsecs with the chiron spectrograph. In *American Astronomical Society Meeting Abstracts*, volume 56, pages 259–05, 2024
2. Todd Henry, Timothy Johns, Madison Leblanc, Jose Carrasco Gaxiola, Andrew Couperus, Elliott Horch, Wei-Chun Jao, Aman Kar, Eliot Vrijmoet, Jennifer Winters, et al. Exploring the solar neighborhood with rock stars and rum: The recons rkstar and rmstar samples. In *American Astronomical Society Meeting Abstracts*, volume 56, pages 432–03, 2024
3. R Luque, Hugh Patrick Osborn, A Leleu, E Pallé, A Bonfanti, O Barragán, TG Wilson, Christopher Broeg, A Collier Cameron, M Lendl, et al. A resonant sextuplet of sub-neptunes transiting the bright star hd 110067. *Nature*, 623(7989):932–937, 2023
4. Thomas Wilson, Anna Simpson, Andrew Collier Cameron, Ryan Cloutier, Vardan Adibekyan, Ancy Anna John, Y Alibert, Manu Stalport, J Egger, Andrea Bonfanti, et al. Lhs 1903 provides evidence for gas-depleted formation of planets around m-dwarfs. 2023
5. Khalid Barkaoui, Mathilde Timmermans, A Soubkiou, BV Rackham, AJ Burgasser, J Chouqar, FJ Pozuelos, KA Collins, SB Howell, R Simcoe, et al. Toi-2084 b and toi-4184 b: Two new sub-neptunes around m dwarf stars. *Astronomy & Astrophysics*, 677:A38, 2023
6. JS Carrasco-Gaxiola, Y Gómez Maqueo Chew, and M Pereyra. Sample of white dwarfs to search for transiting exoplanets from oanspm. *RMxAC*, 55:93, 2023

7. José Sebastián Carrasco Gaxiola, Yilen Gómez Maqueo Chew, and Emma Margarita Pereyra Talamantes. C1-05. muestra de enanas blancas para buscar exoplanetas transitantes desde el oanspm. *INV-01. CUANTIFICACIÓN DE LA HABITABILIDAD EN CUERPOS PLANETARIOS*, page 55

TEACHING & MENTORING EXPERIENCE

Graduate Teaching Assistant August 2022 - Present
Physics & Astronomy Department, GSU Atlanta, Georgia

Lab Instructor of the Astronomy-1020K Lab: Stars and Galaxies.

Teacher Assistant August 2019 - December 2019
Grader and aide for the class Calculus I for Geoinformatic and Geodesic Engineering sophomores at Facultad de Ciencias de la Tierra y el Espacio.

Mentor of Astronomy major students 2018 - 2020
Peer-mentor and instructor for the following Astronomy major courses and labs: Fundamentals of Astronomy, Programming I & II (Labs), Introduction to Astrophysics, Computational Astrophysics I (Lab).

HONORS, AWARDS, GRANTS & FELLOWSHIPS

Paris Pişmiş Award 2021 for undergraduate students, UNAM. Award
For outstanding work and performance as undergrad student working on research at Instituto de Astronomía, UNAM.

B.S. degree received with highest honors. Honor
After defending senior thesis with a GPA greater than 9/10.

Third highest GPA of the generation. Award
Awarded the 3rd highest GPA of the Bachelor in Astronomy 2016-2021's generation.

UNAM PAPIIT graduate research grant (IG-101321). Fellowship
Scholarship aimed to work in research.
Adjuncted at the project "Planetary Systems, yesterday and today".

UNAM PAPIIT undergraduate research grant (IG-101321). Fellowship
Scholarship aimed to finish my undergraduate senior thesis and work on get my title.
Adjuncted at the project "Planetary Systems, yesterday and today".

UNAM PAPIIT undergraduate research grant (IN-107518). Fellowship
Scholarship aimed to work on undergraduate senior thesis.
Adjuncted at the project "SAINT-EX: Discovering transiting exoplanets from San Pedro Mártir".

Elisa Acuña Scholarship. Grant
Scholarship from "National Coordination of Scholarships for Well-being Benito Juárez", for Summer Research as Professional Practice. Folio: 12598933.

Used for the virtual intership at the Instituto de Astronomía at the Universidad Nacional Autónoma de México.

Summer Research Poster Presentation. Award
Awarded 1st place with the poster titled "Comparison of galaxy velocity map models with VELFIT 2.0 tool and its modified version with MCMC".

As part of the Sinaloa Knowledge Journey's month at the Facultad de Ciencias de la Tierra y el Espacio, UAS.

CONFERENCES & WORKSHOPS

American Astronomical Society Conference
Hosted by American Astronomical Society(SOMA), January 2024. Presented the poster: “Identifying Young and Active Stars Among the Nearest 1500 K dwarfs within 40 Parsecs with the CHIRON Spectrograph.”.

Georgia Regional Astronomical Meeting Conference
Hosted by Agnes Scott College, November 2023. Presented the talk: “Characterizing of K Dwarfs within 40 Parsecs.”.

III Latin American Congress of Astrobiology Congress (virtual)
Hosted by Sociedad Mexicana de Astrobiología (SOMA), August 03-06 2021. Presented the poster: “White Dwarfs sample to search for transiting exoplanets from the OAN-SPM”.

2021 Dunlap Institute Virtual Summer School Workshop (virtual)
Hosted by University of Toronto. Introduction to Astronomical Instrumentation.

Code / Astro 2021 Workshop (virtual)
Supported by Heising-Simons Foundation, instructed by researchers from Caltech and IPAC. Software Engineering Workshop for Astronomy.

SERVICE & LEADERSHIP

- Student Society President of the Facultad de Ciencias de la Tierra y el Espacio Dec 2018 - Dec 2020
- Technical Council Member of the Facultad de Ciencias de la Tierra y el Espacio Dec 2018 - Dec 2020
- Member of the Astronomical Society of Sinaloa 2017-present
- Jóvenes con Ciencia (JC) organizer (weekly colloquiums and activities) 2018-2019
- Organizer. Jornada Sinaloense del Conocimiento 2020 (JSC 2020) at Facultad de Ciencias de la Tierra y el Espacio. 2018-2019 October-November, 2020
- Organizer. De la Tierra a la Luna, UAS’s workshop for elementary school students. October to December, 2019.